

**REMARKS**

Claims 5 - 10 are pending in the present application, of which claim 5 has been amended. No new matter has been added. Reconsideration in view of the following remarks is respectfully requested. It is respectfully submitted that this response is fully responsive to the Office Action of December 10, 2002.

**As to the Merits:**

As to the merits of this case, the Examiner sets forth the following new rejection:

claims 5 - 10 stand rejected under 35 U.S.C. § §103(a) as being unpatentable over Applicant's discussion of prior art with reference to Figs. 1 - 6 in view of Shirao.

This rejection is respectfully traversed.

Independent claim 5, as amended, now calls for eliminating frequency components of a frequency area around and coincident with said fundamental frequency; and levitating said body at a predetermined position by magnetic force generated by an electromagnet.

With regard to prior art Figs. 1 - 6, the Examiner asserts the following:

The prior art discloses a method for controlling a magnetic bearing device comprising: detecting a position of a levitated body by a status detector unit, which uses a modulated signal of a certain fundamental frequency; and levitating said body at a predetermined position by magnetic force generated by an electromagnet.<sup>1</sup>

However, the Examiner fails to rely on prior art Figs. 1 - 6 for teaching the feature of eliminating frequency components of a frequency area around and coincident with the fundamental frequency, as now called for in independent claim 5.

Instead, the Examiner relies on the secondary reference of Shirao for teaching the above-noted deficiencies of prior art Figs. 1 - 6. More specifically, the Examiner asserts that:

Shirao et al. disclose eliminating frequency components of a frequency area around a fundamental frequency for the purpose of eliminating distortion frequency of the signal (3,3-1,3-2).<sup>2</sup>

More specifically, according to Shirao:

By setting the band width of the band-pass filters 3-1 and 3-2 as shown by the reference numeral 401 in FIG. 5, it is possible to eliminate noise components having angular frequencies outside the band width of the band-pass filters.

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<sup>1</sup>Please see, lines 12 - 15, page 2 of the outstanding Action .

<sup>2</sup>Please see, lines 16 - 17, page 2 of the outstanding Action .

However, Shirao is only concerned with eliminating angular frequencies outside the bandwidth of the carrier wave frequency. In other words, Shirao fails to disclose or suggest eliminating frequency components which coincide with the carrier wave frequency, as now called for in independent claim 5.

For example, as discussed in page 13 of the present specification, the band eliminator filter 30 eliminates harmonic components of the input signal which coincide with the frequency area that is used by the status detector unit.

Thus, for at least these reasons, it is respectfully asserted that the prior art fails to teach or suggest recitations of claims 5 - 10, and request that the Examiner allow these claims, along with the entire application to issue. Accordingly, withdrawal of the rejections of claims 5 - 10 under 35 U.S.C. §103(a) is respectfully solicited.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicant's undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

Amendment Under 37 C.F.R. §1.111  
March 10, 2003


U.S. Patent Application Serial No. 10/034,123

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

In the event that this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE 10/034,123**

Claim 5 has been amended to read as follows:

5. (AMENDED) A method for controlling a magnetic bearing device comprising:  
detecting a position of a levitated body by a status detector unit, which uses a modulated  
signal of a certain fundamental frequency;  
eliminating frequency components of a frequency area around and coincident with said  
fundamental frequency; and  
levitating said body at a predetermined position by magnetic force generated by an  
electromagnet.